

## A New Species of *Neurotoma* From Michigan (Hymenoptera: Symphyta, Pamphiliidae)

WOODROW W. MIDDLEKAUFF

University of California, Berkeley 94720

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*Abstract.*—A new species of sawfly is described in the small pamphiliid genus *Neurotoma* Konow. Only 3 male specimens are available, all from the same collection in Michigan. Males of two closely related species, *N. crataegi* and *N. willi* are figured and compared. A key to North American species is included.

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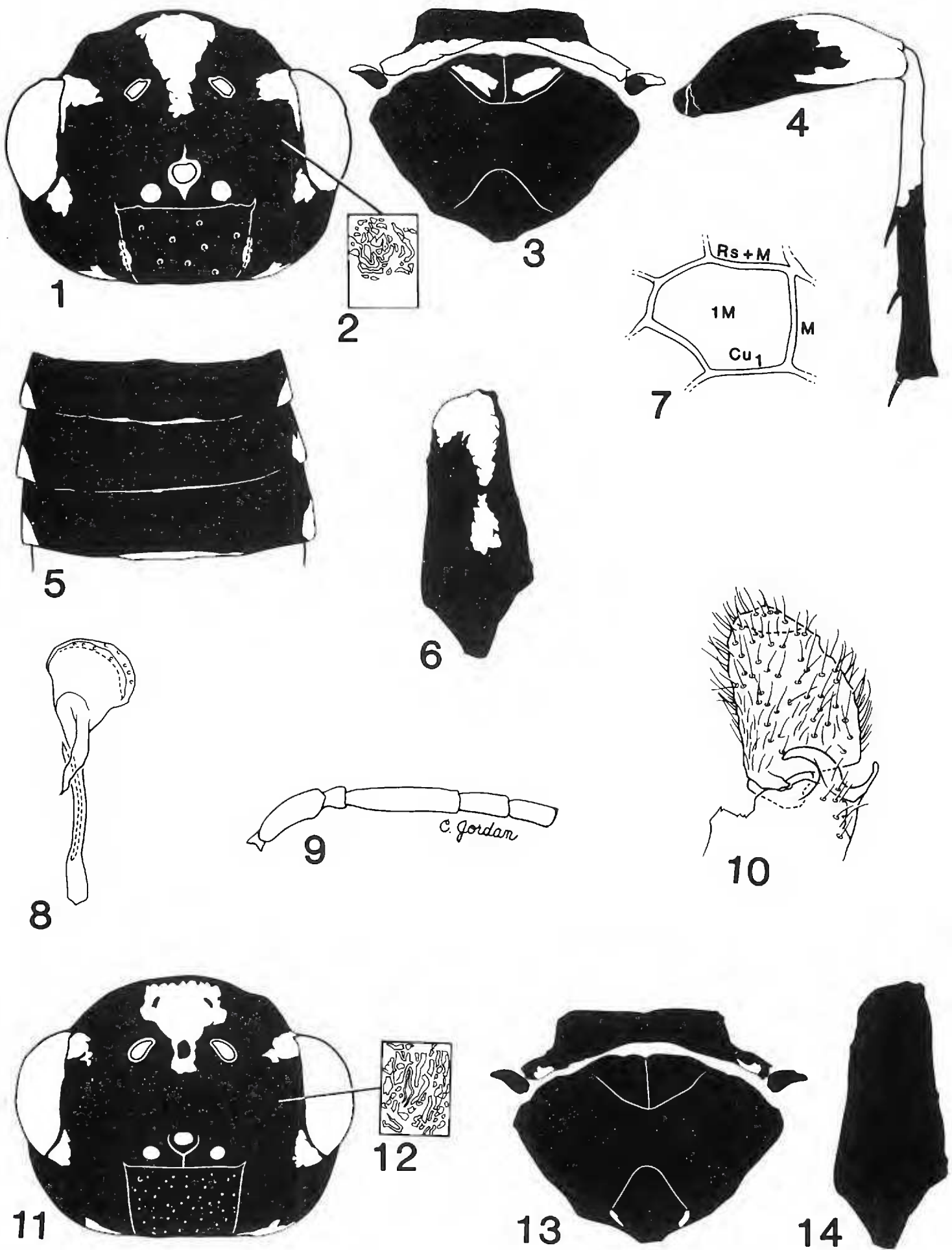
The sawfly genus *Neurotoma* Konow is Holarctic in distribution with the presently described species adding [one] to the four previously described in the Nearctic fauna (Middlekauff, 1940, 1958, 1966; Smith, 1979). The remaining twelve in the genus are found from Europe to Japan and Korea. With but one exception, a Japanese species found on *Quercus* (Shinohara, 1980), all others, where the host(s) are known, feed on the foliage of rosaceous trees and shrubs of the genera *Amelanchier*, *Cotoneaster*, *Crataegus*, *Prunus*, *Pyrus* and/or *Sorbus*.

This article includes the description of the new species, a key to Nearctic species of *Neurotoma* and comparative notes on the males of two closely related species.

### Key to Nearctic species of *Neurotoma*

The new species *nigra* will run to *willi* in Middlekauff's 1958 key, thus necessitating a new one.

1. Tegula black (Fig. 13) ..... *crataegi* Middlekauff  
— Tegula completely or mostly pale (Figs. 3, 26) ..... 2
2. Femora and tibiae entirely pale ..... 3  
— Femora and basally & tibiae apically marked with black ..... 4
3. Wings hyaline, perhaps a very faint infuscated band below stigma; legs beyond coxae mostly pale reddish brown ..... *inconspicua* (Norton)  
— Basal two-thirds of wings heavily infuscated; legs beyond coxae pale yellow ...  
..... *fasciata* (Norton)
4. Pronotum (Figs. 3), mesepisternum (Fig. 6), prescutum (Fig. 3), and lateral margins of abdominal tergites (Fig. 5) with white areas; cell 1M as in Fig. 7; vertex wider than long (Fig. 1); paraantennal field finely rugose (Fig. 2) .....  
..... *willi* Middlekauff  
— Pronotum (Fig. 26), mesepisternum (Fig. 24), prescutum (Fig. 26), and lateral margins of abdominal tergites (Fig. 27) entirely black; cell 1M as in Fig. 19; vertex longer than wide (Fig. 20); paraantennal field smooth, shining (Fig. 21)  
..... *nigra* n.sp.



Figures 1-10. *Neurotoma willi* Middlekauff, male. Figure 1, head, dorsal view. Figure 2, Inset, paraantennal field. Figure 3, Thorax, dorsal view. Figure 4, Hind femur and tibia, lateral view. Figure 5, Abdominal segments III-V, dorsal view. Figure 6, Mesepisternum. Figure 7, Cell 1M, forewing. Figure 8, Penis valve. Figure 9, Antennal segments 1-5. Figure 10, Right half of genital capsule, ventral view. Figures 11-14. *Neurotoma crataegi* Middlekauff, male. Figure 11, Head, dorsal view. Figure 12, Inset, paraantennal field. Figure 13, Thorax, dorsal view. Figure 14, mesepisternum.

*Neurotoma nigra*, new species  
(Figs. 20–28)

*Male, holotype.* Head black with whitish yellow markings only on frons and in the supra ocular areas as in Fig. 20. Antenna entirely black, the scape and pedicel darker. Mouthparts dark brown (alaglossa and paraglossa), with the apical 3 segments of the maxilla and 2 of the labium, whitish yellow. Mandible whitish yellow at base, darker brown to black in middle and reddish brown apically.

Thorax except for the whitish yellow tegula, entirely black (Fig. 26). Coxa black basally, whitish yellow apically. Trochanter whitish yellow. Fore and mid femur basally, black. Hind femur with a black spot basally as in Fig. 28, remainder of femur whitish yellow. Tibia whitish yellow becoming dark brown to black over a lesser area from the fore to hind leg as in Fig. 28. Tarsus brownish the posterior ones somewhat darker. Wings hyaline. Venation, except for the whitish yellow base of 1A, dark brown, the stigma black. Abdomen entirely black (Fig. 27). Harpes pale yellowish brown.

Clypeus rounded in front. Frons swollen, forming an elongate rounded ridge extending onto the swollen clypeus. Median fovea absent. Ocellar basin distinct, crescent shaped in front. Lateral transverse suture becoming faint and disappearing behind lateral ocellus (Fig. 20). Lateral suture diverging so that a line extending it forward would miss the lateral ocellus by two ocellar widths (Fig. 20). Post ocellar area longer than that of *willi* (Figs. 20, 1). Post genal carina distinct extending around vertex to within 2 ocellar widths of lateral suture. Entire head and face, except for shining impunctate paraantennal fields (Fig. 21), with distinct punctures becoming almost coriaceous. The postocular and vertex areas also punctate, but the spaces between these punctures polished. Antenna 19-segmented; A (segment) III:AIV 2.3:1; AIII:AIV + V 1.1.16 (Fig. 25).

Prescutum slightly rugose. Mesoscutum impunctate except for a narrow mid band of shallow punctures, otherwise shining, pebbled under higher magnification. Mesoscutellum depressed, flattened, punctate, antero-laterally carinate but not posteriorly where it rounds off towards the post-tergite. Mesepisternum with numerous shallow punctures each with a long, single hair giving it a distinctly hairy appearance.

Genital capsule (lateral half) as in Fig. 22. Penis valve as in Fig. 23.

Measurements of holotype (in mm): body length 7.9; forewing 7; head width 2.25; antennal scape length 0.56; pedicel 0.25; segment III 0.94; segment IV, 0.37; segment V, 0.37.

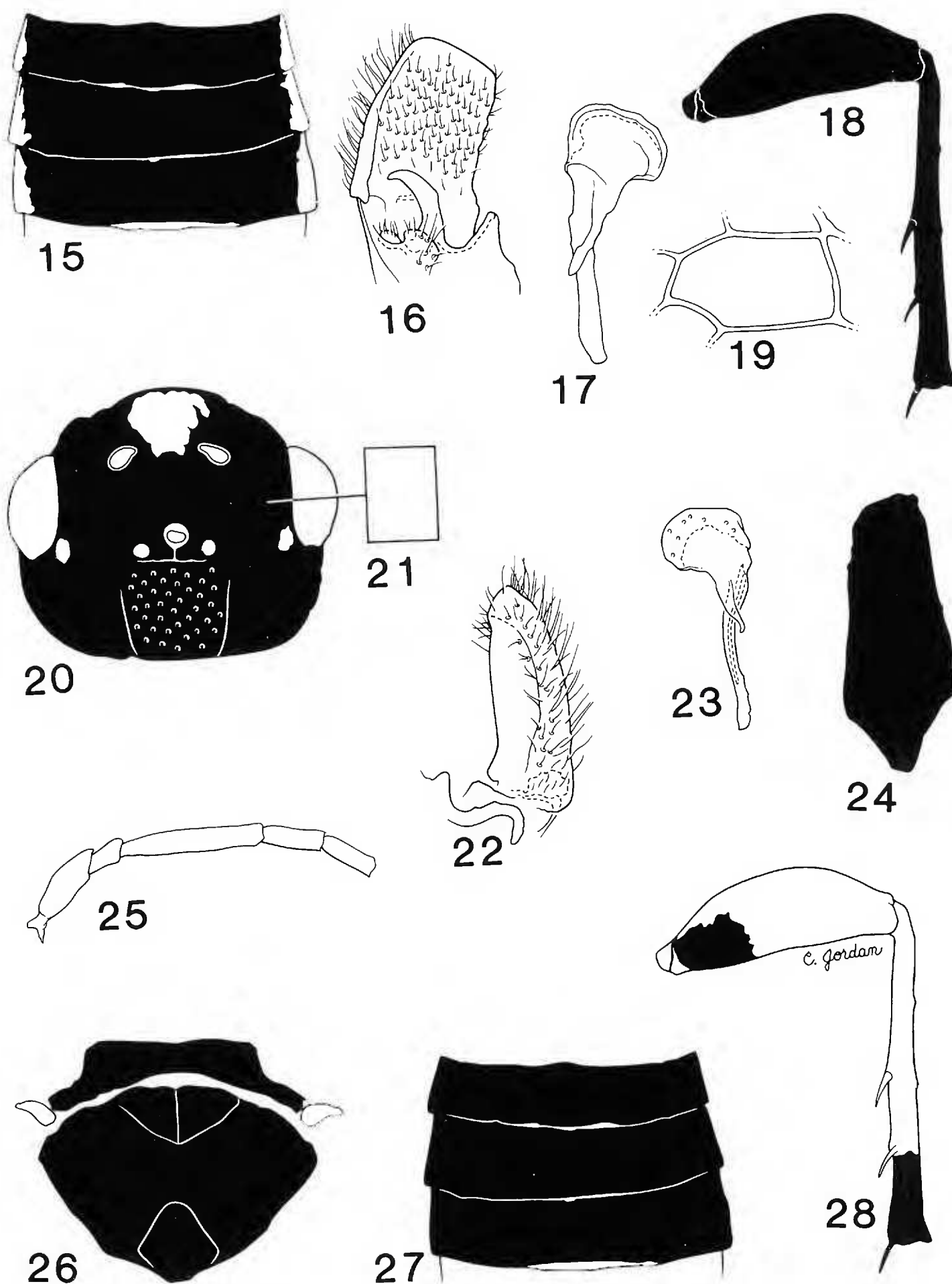
*Female.*—Unknown.

*Host(s).*—Unknown.

*Distribution.*—Michigan.

*Type.*—Holotype, male: Roscommon County, Michigan, 5–31–57 (R. & K. Dreisbach). Paratypes: Two males with same data as holotype. In Michigan State University, East Lansing and Essig Museum, University of California, Berkeley. The holotype will be deposited in the collection, U.S. National Museum, Washington, D.C.

*Discussion.*—This species is quite distinct from the related *N. willi* (Middlekauff, 1958) and *N. crataegi* (Middlekauff, 1940). Except for the frons and a small supraocular spot the head is entirely black as are also the thorax and abdomen;



Figures 15-19. *Neurotoma crataegi* (con't.). Figure 15, Abdominal segments III-V, dorsal view. Figure 16, Left half of genital capsule, ventral view. Figure 17, Penis valve. Figure 18, Hind femur and tibia. Figure 19, Cell 1M, forewing. Figures 20-28. *Neurotoma nigra*, n.sp., male. Figure 20, Head, dorsal view. Figure 21, Inset, paraantennal field. Figure 22, Right half of genital capsule, ventral view. Figure 23, Penis valve. Figure 24, Mesepisternum. Figure 25, Antennal segments 1-5. Figure 26, Thorax, dorsal view. Figure 27, Abdominal segments III-V, dorsal view. Figure 28, Hind femur and tibia.

antennal segment III is longer than segments IV and V combined; the lateral sutures on the vertex are divergent, not parallel; the postocular area is longer; there are more numerous and larger punctures on the head; the 1st medial cell (discoidal) is 2X longer than the basal width, *willi* is only 1.5X longer.

The name *nigra* is given because of the predominant black coloration of the head thorax and abdomen.

***Neurotoma willi* Middlekauff**

(Figs. 1–10)

Comparative comments: *N. willi* is similar to *nigra* in some respects but differs in the points given in the key to species and shown in Figs. 1–10. In addition the post ocular area is finely grained (or pebbled) and lacks pits; some specimens have one or two small white spots laterally on the mesonotum; a few specimens have the tegula completely black; the basal two-thirds of vein 1A is black; base of mandible black; the lateral white spot on each abdominal tergite extends ventrally on the posterior third of the spiracle bearing lateral tergites; sternites III–VII, each has a white area on the mid-apical border; harpes black, never yellowish brown; frons and clypeus impunctate; the mesoscutellum is distinctly carinate except for a small medial posterior area.

***Neurotoma crataegi* Middlekauff**

(Figs. 11–19)

Comparative comments: *N. crataegi* is also similar to *nigra* in some respects, but is apparently not quite as closely related as is *willi*. Many of the differences are given in the key to species and in Figs. 11–19. In addition to these the clypeus and frons are rugose, lacking distinct pits; the post ocular area and vertex are also rugose with a few scattered shallow pits; rarely is the pronotum completely black; occasional specimens have small white spots on the prescutum while others may have the mesoscutellum completely black; all wing veins are completely brownish black and the wings are entirely lightly infuscated; base of mandible is black; the lateral white spot on each abdominal tergite extends from the spiracle as a narrow band, only expanding slightly on posterior border; harpes black; the mesoscutellum is distinctly carinate laterally.

ACKNOWLEDGMENTS

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